

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application

Listing of Claims:

1. (Currently Amended) A ~~semiconductor~~ light-emitting device diode comprising:
a substrate made of group III-V nitride semiconductor;
a first n-type semiconductor layer containing indium and formed over a main surface of the substrate; ~~[[and]]~~
a light-emitting layer formed over the first n-type semiconductor layer;
a second n-type semiconductor layer formed between the substrate and the first n-type semiconductor layer; and
a third n-type semiconductor layer formed between the first n-type semiconductor layer and the light-emitting layer.
2. (Currently Amended) The ~~device~~ diode of claim 1,
wherein the substrate is made of gallium nitride.
3. (Currently Amended) The ~~device~~ diode of claim 1,
wherein the main surface of the substrate is polished.
4. (Currently Amended) The ~~device~~ diode of claim 3,
wherein the main surface of the substrate is etched.
5. (Currently Amended) The ~~device~~ diode of claim 3,

wherein the main surface of the substrate is planarized.

6. (Currently Amended) The ~~device~~ diode of claim 1,
wherein the light-emitting layer has a multiple quantum well structure formed by
alternately stacking a quantum well layer and a barrier layer, and
the quantum well layer has a thickness of 1 to 2.5 nm inclusive.

7. (Currently Amended) The ~~device~~ diode of claim 1,
wherein the first n-type semiconductor layer is made of a compound whose general
formula is represented by $\text{In}_a\text{Al}_b\text{Ga}_{1-a-b}\text{N}$ ($0 < a \leq 1$, $0 \leq b < 1$, $a+b \leq 1$).

8. (Currently Amended) The ~~device~~ diode of claim 7,
wherein the aluminum content of the first n-type semiconductor layer is 3% or lower.

9. (Currently Amended) The ~~device~~ diode of claim 1,
wherein the first n-type semiconductor layer has a thickness of 10 nm to 1 μm inclusive.

10. (Cancelled)

11. (Currently Amended) The ~~device~~ diode of claim [[10]] 1,
wherein the second n-type semiconductor layer is made of a compound whose general
formula is represented by $\text{In}_c\text{Al}_d\text{Ga}_{1-c-d}\text{N}$ ($0 \leq c < 1$, $0 \leq d < 1$, $c+d < 1$).

12. (Currently Amended) The ~~device~~ diode of claim [[11]] 1,
wherein the second n-type semiconductor layer is an n-type contact layer.

13. (Cancelled)

14. (Currently Amended) The ~~device~~ diode of claim [[13]] 1,
wherein the third n-type semiconductor layer is an n-type contact layer.

15. (Currently Amended) The ~~device~~ diode of claim 1, further comprising a fourth n-type semiconductor layer formed between the first n-type semiconductor layer and the light-emitting layer.

16. (Currently Amended) The ~~device~~ diode of claim 15,
wherein the fourth n-type semiconductor layer is made of a compound whose general formula is represented by $\text{Al}_e\text{Ga}_{1-e}\text{N}$ ($0 \leq e < 1$).

17. (Currently Amended) The ~~device~~ diode of claim 16,
wherein the fourth n-type semiconductor layer is a cladding layer.

18. (Currently Amended) The ~~device~~ diode of claim 17,
wherein the cladding layer has a thickness of 5 to 200 nm inclusive.

19. (Currently Amended) The ~~device~~ diode of claim 1, further comprising:

an n-type contact layer which is formed between the substrate and the light-emitting layer and a portion of which is exposed;

an n-side electrode formed on the exposed portion of the n-type contact layer;

an n-type cladding layer formed between the first n-type semiconductor layer and the light-emitting layer;

a p-type semiconductor layer formed on the light-emitting layer; and

a p-side electrode formed over the p-type semiconductor layer,

wherein the device is mounted with an element formation surface thereof facing a submount for mounting.

20. (Currently Amended) ~~[[A]]~~ An illuminating device comprising ~~[[the]]~~ multiple semiconductor light-emitting device diodes, of claim 1.

wherein the diodes including:

a substrate made of group III-V nitride semiconductor;

a first n-type semiconductor layer containing indium and formed over a main surface of the substrate; and

a light-emitting layer formed over the first n-type semiconductor layer.

21. (New) The diode of claim 1, wherein the light-emitting layer has a multiple quantum well structure formed by alternately stacking a quantum well layer made of group III-V nitride semiconductor not containing As, P and Sb, and a barrier layer made of group III-V nitride semiconductor.